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## CUSTOMER RELEASE NOTES

### ***SmartSTACK Fast Ethernet Switches ELS100-24TX, ELS100-24TXG, and ELS100-24TXM Firmware Version 2.02.04 May 19, 2000***

#### **INTRODUCTION:**

The ELS100-24TX SmartSTACK Fast Ethernet Switch provides 24 10/100 Mbps RJ45 ports.

The ELS100-24TXG SmartSTACK Fast Ethernet Switch provides 24 10/100 Mbps RJ45 ports and 2 GPIM interface slots for Gigabit connectivity via Cabletron GPIM modules. The GPIMs add two additional ports, 25 and 26, for a total of 26 potentially active ports.

The ELS100-24TXM SmartSTACK Fast Ethernet Switch provides 24 10/100 Mbps RJ45 ports and 2 100BASE-FX multimode and/or singlemode fiber SC ports via a plug-in module (EPIM100-2F2/2F3/2F4). RJ45 ports 1 and 2 are disabled when the fiber ports are installed for a total of 24 potentially active ports.

**It is recommended that one thoroughly review this release note prior to the installation or upgrade of this product.**

#### **FIRMWARE SPECIFICATION:**

Status	Version No.	Version Displayed as *	Type	Release Date
Current Version	2.02.04	2.1.2.4	Customer	5/19/00
Previous Version	2.02.01	2.1.2.1	Customer	2/07/00
Previous Version	2.01.07	2.1.1.7	Customer	1/21/00
Previous Version	2.01.00	2.1.0.0	Customer	08/13/99
Previous Version	2.00.02	2.0.0.2	Customer	02/11/99
Previous Version	1.00.02	1.0.0.2	Customer	11/01/98
Previous Version	1.00.01	1.0.0.1	Customer	09/01/98
Previous Version	1.00.00	1.0.0.0	Customer	08/01/98

\* Note: This is the version as displayed by local and remote management.

#### **HARDWARE COMPATIBILITY:**

ALL

#### **BOOTPROM COMPATIBILITY:**

Bootprom Version: 1.01 or greater (NOTE: It is recommended that units with bootcode older than V1.05 be upgraded. See additional information under Known Restrictions and Limitations section, Item #3.)



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### NETWORK MANAGEMENT SOFTWARE SUPPORT:

NMS Platform	Version No.	Module No.
SPECTRUM	Post 5.0	Rev. 1 /CS2/MMS2 (SM-CSI1064)
SPMA (Spectrum Portable Management Application)	Post 3.2	Rev. 1
SPEL (Spectrum/NetSight Element Manager)	2.02.00	N/A

If you install this image, you may not have control of all of the latest features of this product until the next version(s) of network management software. Please review the software release notes for your specific network management platform for details.

### SUPPORTED FUNCTIONALITY:

Features	Support
802.1P – Traffic Management	YES
802.1Q – VLAN tagging and identification	YES
802.1D – Transparent Bridging	YES
Auto Negotiation	YES
Broadcast Suppression	YES
Local Management via TELNET	YES
Modem Support (external)	YES
Port Mirroring	YES
RMON	YES
SNMP	YES
Virtual Networking – VLANs	YES
Cabletron WebView	YES
Port Trunking (“Link Aggregation”)	YES

### INSTALLATION AND CONFIGURATION NOTES:

In general, the **ELS100-24TXG** or **ELS100-24TXM** will be shipped to you pre-configured with this version of firmware. If you would like to upgrade an existing **ELS100-24TX**, **ELS100-24TXG** or **ELS100-24TXM**, please follow the TFTP download instructions that are included with your firmware image upgrade kit. TFTP download instructions are also available on the Cabletron Support Web Site at: <http://www.cabletron.com/support/techtips/tk0208-9.html>.

### FIRMWARE CHANGES AND ENHANCEMENTS:



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1. The firmware has been modified to prevent an NFS mount problem.
2. The firmware has been modified to fix a SPECTRUM Auto discovery issue.
3. The firmware has been modified to fix a trunk port loop issue.
4. A problem where extra ports were disabled when a range of ports were disabled has been fixed.
5. A problem where high error counts and high utilization of the Gigabit ports on ELS100-24TXG showed as symptoms has been fixed.
6. A problem where port status of OID 1.3.6.1.2.1.17.2.15.1.4. could not be changed when using Spectrum Element Manager (now called NetSight Element Manager) or other MIB tools has been fixed.
7. A problem with the Gigabit ports on ELS100-24TXG with broadcast traffic, pause frames, has been fixed.
8. A problem where Trunking was disabled through the user interface and did not remain disabled after re-boot has been fixed.

## KNOWN RESTRICTIONS AND LIMITATIONS:

1. **Upgrading 1.00.0x firmware to 2.00.02 or greater erases configuration information.**  
When upgrading firmware from any 1.00.0x version to 2.00.02 or greater, the switch configuration information such as IP address, VLANs, etc. will be lost and must be reprogrammed. (Upgrades from version 2.00.02 to any higher version do not erase the configuration.)
2. **Upgrading 2.00.02 firmware to any higher firmware version erases VLAN configuration information.** Additionally, the VLAN Enable parameter must be re-set to Yes. All other configuration parameters, such as IP address, are retained. It is strongly recommend that any VLAN configuration information be written down or otherwise captured before upgrading, to assist in re-entering this information.
3. In order to use the embedded Web Management feature when upgrading from any 1.00.0x version to 2.00.02 or greater, two file downloads must be performed. First, the image file (**2xxxx.dnl**) must be downloaded to the switch and then a second file (**2xxxx.web**) must be downloaded for Web Management.  
(Note: This applies only to upgrades, as new units will be configured with the appropriate files at the time of manufacture.)
4. Boot code version 1.05 is recommended for the ELS100-24TX/TXM/TXG (see item #16, below). The filename for V1.05 bootcode is "**BT105.dnl**". To determine which bootcode version is currently installed on the ELS100-24TX/TXM/TXG you must connect a terminal or terminal emulator to the console (serial) port, monitor the output of the switch, and reset (or restart) the switch; the bootcode version will be briefly displayed. In general, units with serial numbers beginning with 9908 or greater will already have V1.05 bootcode factory installed; the unit's serial number can be found on the rear of the unit or retrieved via any standard management method.  
**Note:** When upgrading from any V1.00.0x to V2.00.02 or greater, and installing the Web management image, the images must be installed in the following order: first: the "2xxxx.dnl" file, then the "2xxxx.web" file, and last: the "BT105.dnl" file.
5. Certain traffic patterns may occasionally place addresses into the forwarding table that have not been actually seen by the switch. The Source MAC address of error frames (64 bytes or greater in length) is improperly learned by the switch.
6. Error and dropped packet statistics reported on the "Switch Summary and Individual Port Statistics" screen may not synchronize properly with each other; dependant on the traffic flow through the switch.
7. Broadcast frames increment the SNMP "ifOutOctets" counter for ports that have no link.
8. When new entries are made to the SNMP RMON log table, they are not done so sequentially.
9. VLAN must be enabled to use Class of Service (priority queuing).

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10. ELS100-24TX: The maximum number of port based VLANs that can be configured on the switch is eight.  
ELS100-24TXG/24TXM: The maximum number of port based VLANs that can be configured on switches manufactured in week 9908 and later (and running this version of firmware) is 128. Any VLAN ID within the range of 0-4095 is valid, but only 128 VLANs can be created on the switch at one time.  
**(Note: Units manufactured prior to week 9908 will support only eight VLANs.)**
11. The broadcast performance on one group of 8 ports (1-8, 9-16, or 17-24) is less than that of the ports on the switch; dependent on which switch cluster broadcasts are being passed to the CPU.
12. When VLAN operation on the switch is enabled, the overall throughput performance of the switch drops due to the fact that internally, each packet passing through the switch is appended with a four byte IEEE 802.1Q VLAN tag.
13. When using the port mirroring feature, the mirroring and mirrored (source and destination) ports must be in the same switch cluster.(i.e. Group of 8 ports)
14. When using port mirroring, traffic rates on the mirroring port may be less than those on the mirrored port; dependent on the traffic flow through the switch.
15. Discard address filtering rules can be overwritten. If a packet is received by the switch with a source MAC address that is the same as a static address set to be discarded, the discard rule will be overwritten, allowing packets with the source address to be forwarded through the switch.
16. When transmitting packets out of a port, the packet size statistics counters on the Port Statistics screen do not increment properly. The counters do properly increment for packets received on the port.
17. Firmware upgrades to version 2.00.XX and later on switches running boot code version 1.02 or earlier can only be made in-band via TFTP, not out-of-band via XMODEM. The Boot code version must be upgraded to 1.05 or greater for download via XMODEM. (See Item #3, above)
18. The switch will execute a software reset after performing a TFTP download. The reset will occur whether or not the download was successful or failed.
19. If Hewlett-Packard GBIC (Gigabit Ethernet Interface Converter) modules are inserted/removed on the ELS100-24TXG while power is applied to the switch, they may become damaged. The damage results in the presence and type identity of the GBIC not being recognized by software. Data will still be switched successfully through the port.
20. The following issues are present when using the Port Trunking feature in this release of firmware:
  - When configuring Port Trunking, the Spanning Tree path costs on ports can become misconfigured.
  - Ports in different VLANs can be placed into the same trunk, which should not be allowed.
  - Trying to add a port to a trunk that has been created in a different switch cluster (group of 8 ports) causes the ports in the trunk to be erroneously deleted.
  - When a trunk group is configured, and the first port of that trunk group becomes disabled, local management reports that the entire trunk status is disabled; this is a false signal. The status can be corrected by disabling and re-enabling that port.
  - This release does not provide compatibility with DEC Hunt Group proprietary protocol mode of operation; this functionality will be provided in a future release.

Please refer to the addendum to the ELS100-24TXG/TXM User Guides (Document # 9033194) for detailed information regarding port trunking configuration.
21. When a BootP server and DHCP server are both present in the network, in some cases only the IP address will be acquired; the firmware image will not be received. Both protocols work properly when only one server type is present. This condition also existed in earlier versions of firmware. Cabletron's recommendation is to remove the DHCP server and reboot the switch; this will cause the switch to send BootP requests and receive an image from the BootP server.
22. When Microsoft Internet Explorer is used to access Cabletron WebView management, the initial start-up time is excessive (approximately 20 minutes), after which it performs normally. To avoid this delay, the switch's IP address should be added to Internet Explorer's Proxies "Ignore" area.

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23. When using Cabletron WebView, an ELS100-24TXM which does not have an uplink installed is incorrectly reported to be an ELS100-24TX. This condition also existed in earlier versions of firmware.
24. Older versions of ELS100-24TX may not support the Cabletron WebView image download, due to insufficient memory.
25. When configuring 802.1Q trunks, the VLAN that includes the ports configured as trunks must not have those ports on the egress list for that VLAN. This results in a mis-configuration.
26. When configuring Port Trunks as 802.1Q trunks, you must add the port trunks to the egress list as a pair. Adding them separately results in an error reporting a VLAN violation.
27. When performing a TFTP file download to the switch, it may be necessary to repeat the process to successfully receive the entire file. Also, if a file that has been received is corrupt, the switch may enter a state where it is expecting to receive a new image via XMODEM download. This can be verified and corrected by invoking a local management session to the console (serial) port; the switch will send the character "c" to the console station until an XMODEM transfer of a new firmware image file is sent. For additional information, please reference <http://www.cabletron.com/support/techtips/tk0564-9.html> for XMODEM instructions, and <http://www.cabletron.com/support/techtips/tk0490-9.html> for TFTP/BootP instructions.
28. Contrary to the user manuals, the READ/WRITE and READ-ONLY passwords are case-sensitive in this version of firmware. The passwords must be typed exactly as they were created.
29. Broadcast packets are counted as filtered packets.

Any other problems than those listed above should be reported to our Technical Support Staff.

## COMPLIANCE SUPPORT:

Compliance Level	Compliant
Year 2000	YES*

Known Anomalies: None.

- \* No "Real-Time Clock" is supported with the ELS100-24TX, ELS100-24TXG and ELS100-24TXM Firmware Version 2.02.04.

## IEEE STANDARDS SUPPORT:

Standard	Title
IEEE 802.1D	Transparent Bridging Specifications (ISO/IEC 10038)
IEEE 802.1P	Traffic Class Expediting and Dynamic Multicast Filtering
IEEE 802.1Q	Virtual Bridged Local Area Networks
IEEE 802.2	Local Area Networks, Logical Link Control (LLC)
IEEE 802.3	CSMA/CD 9 (ISO/IEC 8802-3)
IEEE 802.3i	10Base-T (ISO/IEC 8802-3, clause 14)
IEEE 802.3u	100Base-TX (ISO/IEC 8802-3, clause 25)
IEEE 802.3u	100Base-FX
IEEE 802.3x	Flow Control

## IETF STANDARDS MIB SUPPORT:

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RFC No.	Title	Groups Supported
1213	MIB-II	System, Interfaces, Address Translation, IP, ICMP, TCP, UDP, Transmission, and SNMP
1398	Ethernet MIB	Ethernet-specific statistics subgroup of the MIB-II Transmission Group
1493	Bridge MIB	Spanning Tree, Forwarding Table Information, and Configuration
1757	RMON MIB	Statistics, History, Alarm, and Event
2233	Interfaces MIB	Stack Table
NA	802.1p MIB	ExtBase, Priority
NA	802.1Q MIB	Base, Filtering Database, Static, VLAN

### CABLETRON PRIVATE ENTERPRISE MIB SUPPORT:

Title	Description
ctELS100-NG-mib.txt, Revision: 1.03.00	Provides management information for the next generation of the ELS100 product line, part of the SmartStack product line.
ct-smarttrunk-mib.txt	Provides definitions for Cabletron's Enterprise-specific port-trunking MIB.

Cabletron Private Enterprise MIBs are available in ASN.1 format from the Cabletron Web Site at: <http://www.cabletron.com/support/mibs/> . Indexed MIB documentation is also available.

### SNMP TRAP SUPPORT:

RFC No.	Title
RFC 1157	IETF SNMP coldStart generic 0 linkDown 2 linkUp 3 authenticationFailure 4 enterpriseSpecific 6
RFC 1493	IETF Bridge, ENTERPRISE dot1dBridge -- 1.3.6.1.2.1.17 newRoot specific 1 topologyChange 2
RFC 1757	IETF RMON, ENTERPRISE rmon -- 1.3.6.1.2.1.16 risingAlarm 1 fallingAlarm 2

### CABLETRON PRIVATE ENTERPRISE TRAP SUPPORT:

Title
None. (Please reference "SNMP TRAP SUPPORT" Section above.)



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### GLOBAL SUPPORT:

By Phone: (603) 332-9400  
By Email: [support@cabletron.com](mailto:support@cabletron.com)  
By Web: <http://www.cabletron.com/support>  
By Fax: (603) 337-3075  
By Mail: Cabletron Systems, Inc.  
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For information regarding the latest firmware available, recent release note revisions, or if you require additional assistance, please visit the Cabletron Support Web Site.